

Contents

Letters to the Editor

- Implications for the detection of ultra-high-energy gamma rays from Sco X-1
Mitra, A.K. L1
- A common envelope model for SN 1987 A
Hillebrandt, W., Meyer, F. L3
- EXO 032957-2606.9: a new long-period probable AM Herculis binary
Beuermann, K., Thomas, H.-C., Giommi, P., Tagliaferri, G., Schwope, A.D. L7
- Abundant molecular gas in the starburst galaxy IRAS 0833+652
Wiklund, T. L11
- HR 107 – an F-type mild barium dwarf star
Tomkin, J., Lambert, D.L., Edvardsson, B., Gustafsson, B., Nissen, P.E. L15
- Rotating $H^{13}Co^+$ disk and corotating $H^{12}Co^+$ lobes in the L 1551 outflow source
Liljeström, T. L19
- Tidal evolution in the Neptune-Triton system
Chyba, C.F., Jankowski, D.G., Nicholson, P.D. L23
- The generation of MHD waves by forced turbulence in a weakly magnetized fluid
Rosner, R., Musielak, Z.E. L27

Cosmology

- The fractal dimension in the large-scale distribution of galaxies with different luminosities
Wen, Z., Deng, Z.-G., Liu, Y.-Z., Xia, X.-Y. 1
- The effect of primordial perturbations on the extragalactic infrared background
Fabbri, R., Lucchin, F., Matarrese, S. 7
- A scenario for the formation of astronomical objects from superstrings
Brosche, P., Tassie, L.J. 13
- Freely propagating polarized radiation in curved spacetimes
Bildhauer, S. 25
- Richness-dependence of cluster-cluster correlations
Börner, G., Houjun Mo, Yaoquan Chu 29

Extragalactic astronomy

- The group environment of Seyfert galaxies. I
Kollatschny, W., Fricke, K.J. 34
- Active galactic nuclei as accreting turbulent synchrotron-self-Compton sources
Atayan, A.M., Nahapetian, A. 53
- The synchrotron spectra of radio hot spots
Meisenheimer, K., Röser, H.-J., Hiltner, P.R., Yates, M.G., Longair, M.S., Chini, R., Perley, R.A. 63
- The nature of radio-quiet quasars
Chini, R., Kreysa, E., Biermann, P.L. 87
- (RN) A compact group in Virgo
Mamon, G.A. 98
- (RN) A comparative study of the discrete and cross correlation techniques: an application to the NGC 5548 IUE light-curve
Rodríguez-Pascual, P.M., Santos-Lleó, M., Clavel, J. 101

Stellar clusters and associations

- The effect of gas removal on the dynamical evolution of young stellar clusters
Verschueren, W., David, M. 105
- The calibration of intrinsic colours in *uvby* photometry
Delgado, A.J., Alfaro, E.J. 121
- Red giants in open clusters. I. Binarity and stellar evolution in five Hyades-generation clusters: NGC 2447, 2539, 2632, 6633 and 6940
Mermilliod, J.-C., Mayor, M. 125

Formation, structure and evolution of stars

- The pre-main-sequence binary system AK Scorpii
Andersen, J., Lindgren, H., Hazen, M.L., Mayor, M. 142
- An analysis of high resolution spectra of the B[e]-stars CPD-52°9243 and MWC 300
Winkler, H., Wolf, B. 151
- An X-ray and optical study of the low-mass X-ray source 4U 1556-605
Motch, C., Pakull, M.W., Mouchet, M., Beuermann, K. 158

Globular clusters in the Large Magellanic Cloud: NGC 1866, a test for convective overshoot <i>Chiosi, C., Bertelli, G., Meylan, G., Ortolani, S.</i>	167	New radio observations of two supernova remnants in Cassiopeia: G 126.2+1.6 and G 127.1+0.5 <i>Joncas, G., Roger, R.S., Dewdney, P.E.</i>	303
(RN) The origin of flat radio spectra in shell-type supernova remnants <i>Schlickeiser, R., Furst, E.</i>	192	The Sun	
(RN) Detection of a brief outburst from the intermediate polar V 1223 Sgr <i>van Amerongen, S., van Paradijs, J.</i>	195	Comments on the photospheric dynamo model of Hénoux and Somov <i>Melrose, D.B., Khan, J.I.</i>	308
Stellar atmosphere.		The solar rotation 1883 until 1893 as inferred from the Greenwich photoheliographic results and observations published by G. Spörer <i>Wöhl, H., Balhar, H.</i>	313
Effective temperatures of Ap stars <i>Stepien, K., Dominiczak, R.</i>	197	(RN) A relation between Balmer and soft X-ray emission in flares <i>Haisch, B.M.</i>	317
Radiation-driven winds of hot stars. VI. Analytical solutions for wind models including the finite cone angle effect <i>Kudritzki, R.P., Pauldrach, A., Puls, J., Abbott, D.C.</i>	205	The solar system	
The H α profile of Algol <i>Gillet, D., Mouchet, M., North, P.</i>	219	(RN) Vesta's shape, density and albedo features <i>Cellino, A., Di Martino, M., Drummond, J., Farinella, P., Paolicchi, P., Zappalà, V.</i>	320
The spectrograms of Sanduleak -69°202, precursor to Supernova 1987A in the Large Magellanic Cloud <i>Walborn, N.R., Prévot, M.L., Prévot, L., Wamsteker, W., González, R., Gilmozzi, R., Fitzpatrick, E.L.</i>	229	Post-perihelion photometry of comet Liller (1988 a) at Catania (Italy) Observatory <i>Baratta, G.A., Catalano, F.A., Leone, F., Strazzulla, G.</i>	322
Revisited mass-loss rates for a sample of central stars of planetary nebulae <i>Hutsemékers, D., Surdej, J.</i>	237	Physical and chemical processes	
Magnetic structure in cool stars. XVI. Emissions from the outer atmospheres of M-type dwarfs <i>Rutten, R.G.M., Schrijver, C.J., Zwaan, C., Duncan, D.K., Mewe, R.</i>	239	Stark broadening of He II lines and new results in astrophysical spectroscopy <i>Schöning, T., Butler, K.</i>	326
(RN) $\Delta\alpha$ -photometry of λ Bootis stars <i>Maitzen, H.M., Pavlovski, K.</i>	253	Cyclotron spectrum from a dipole magnetic field accretion column <i>Canalle, J.B.G., Opher, R.</i>	334
CO and SiO thermal emission in evolved stars <i>Bujarrabal, V., Gómez-González, J., Planesas, P.</i>	256	Asymptotic analysis of resonance polarization and escape probability approximations <i>Faurobert-Scholl, M., Frisch, H.</i>	338
Radiation pressure on circumstellar grains. Opacity effects <i>Lefèvre, J.</i>	265	Instruments, data processing, and computational methods	
Eclipse cross-sections of cool components in double star systems <i>Isliker, H., Nussbaumer, H., Vogel, M.</i>	271	Detection of weak signals in TeV gamma-ray astronomy: dc excess vs. periodic amplitude <i>Lewis, D.A.</i>	352
Detection of Lyman α in the spectrum of a white dwarf with helium atmosphere <i>Koester, D., Weidemann, V.</i>	276	The gamma-ray emissivity of the Earth's atmosphere <i>Dean, A.J., Lei Fan, Byard, K., Goldwurm, A., Hall, C.J., Harding, J.S.J.</i>	358
Diffuse matter in space (including H II regions and planetary nebulae)		Erratum: Simulated annealing image reconstruction in photon-limited stellar speckle interferometry <i>Navarro, R., Fuentes, F.J., Nieto-Vesperinas, M.</i>	362
^{12}CO ($J=1-0$) and ($J=2-1$) mapping of the ζ Ophiuchi diffuse cloud <i>Le Boulbot, J., Gérin, M., Péroult, M.</i>	279	Abstracts of articles which have been published in A. & A. Suppl. Ser. 78, No. 3	
(RN) Diffuse interstellar extinction: the nature of the dust component <i>Perrin, J.-M., Sivan, J.-P.</i>	286	A survey of several southern high-velocity complexes <i>Bajaja, E., Cappa de Nicolau, C.E., Martín, M.C., Morras, R., Olano, C.A., Pöppel, W.G.L.</i>	363
HCN and HNC observations towards dark clouds <i>Harju, J.</i>	293	Photometric metal abundances of high-luminosity red stars in young and intermediate-age open clusters <i>Clariá, J.J., Lapasset, E., Minniti, D.</i>	363
		Monte Carlo simulations of neutrino in type II supernovae <i>Janka, H.-T., Hillebrandt, W.</i>	363

A catalogue of stellar 1612 MHz maser sources <i>te Lintel Hekkert, P., Versteeg-Hensel, H.A., Habing, H.J., Wiertz, M.</i>	364	Measurements of visual double stars made with the 152 cm telescope at Calar Alto <i>Couteau, P., Docobo, J.A., Elipe, A., Ling, J.F.</i>	365
A search for time variability and its possible regularities in linear polarization of Be stars <i>Huang, L., Hsu, J.C., Guo, Z.H.</i>	364	Spectral energy distributions of Be stars. III. Envelope models derived from new measurements for 17 stars <i>Dachs, J., Poetzel, R., Kaiser, D.</i>	365
Study of the fine structure in a high-positive velocity cloud <i>Cavarischia, G.A., Morras, R.</i>	364	Stellar integrated fluxes in the wavelength range 380 nm– 900 nm derived from Johnson 13-colour photometry <i>Petford, A.D., Blackwell, D.E.</i>	366
Contribution to the study of F-G-K-M binaries. V. Orbital elements of the spectroscopic binary HD 189578 <i>Pédoussaut, A., Carquillat, J.M., Ginestet, N.</i>	364	Physical studies of asteroids. XIX. Phase relations and composite lightcurves obtained with the Carlsberg Merid- ian Circle <i>Lagerkvist, C.-I., Magnusson, P., Williams, I.P., Buontempo, M.E., Gibbs, P., Morrison, L.V.</i>	366
BVR photoelectric photometry of late-type stars and a compilation of other data in the Small Magellanic Cloud <i>Maurice, E., Bouchet, P., Martin, N.</i>	365	<i>Erratum et addendum:</i> Catalogue of Ap and Am stars in open clusters <i>Renson, P.</i>	366
Catalogue of stars measured in the Geneva Observatory photometric system (fourth edition) <i>Rufener, F.</i>	365		